What is claimed is:

1. A progressive multifocal lens for correcting an eyesight, said lens having a progressive refractive surface on an eyeball side, said progressive refractive surface comprising:

a far-use portion,

a near-use portion having a refractive power different from the far-use portion, and

a progressive portion whose refractive power changes progressively between the far-use and near-use portions,

wherein the progressive refractive surface is a combination of an original progressive refractive surface for remedying only eyesight and a an original toric surface for remedying only astigmia based on a following formula:

$$z_p = \frac{2\left(\dfrac{(c_p + c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right) - (c_p + c_x)\left(\dfrac{(c_p + c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right)^2 + (c_p + c_x)x_p^2}{1+\sqrt{\left(1-\dfrac{(c_p + c_x)(c_p + c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right)^2 - (c_p + c_x)^2 x_p^2}}$$

where z-axis is an axis which passes through a center of the progressive refractive surface from an object side onto the eyeball side,

x-axis is in a direction of an cylinder axis of the original toric surface, and

y-axis is an axis which is orthogonal to the z-axis and the x-axis,

z_p is any point $P(x_p, y_p, z_p)$ of the combined refractive surface,

C_p is an approximate curvature of the original progressive refractive surface, C_x is

a curvature in the direction of the cylinder axis of said original toric surface, and

C_y is a curvature in a direction orthogonal to said cylinder axis.

2. A progressive multifocal lens for correcting an eyesight, said lens having a progressive refractive surface on an object side, said progressive refractive surface comprising:

a far-use portion,

a near-use portion having a refractive power different from the far-use portion, and

a progressive portion whose refractive power changes progressively between the far-use and near-use portions,

wherein the progressive refractive surface is a combination of an original progressive refractive surface for remedying only eyesight and a an original toric surface for remedying only astigmia based on a following formula:

$$z_p = \frac{2\left(\dfrac{(c_p+c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right) - (c_p+c_x)\left(\dfrac{(c_p+c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right)^2 + (c_p+c_x)x_p^2}{1+\sqrt{\left(1-\dfrac{(c_p+c_x)(c_p+c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right)^2 - (c_p+c_x)^2 x_p^2}}$$

where z-axis is an axis which passes through a center of the progressive refractive surface from the object side onto an eyeball side,

x-axis is in a direction of an cylinder axis of the original toric surface,

y-axis is an axis which is orthogonal to the z-axis and the x-axis,

z_p is any point $P(x_p, y_p, z_p)$ of the combined refractive surface,

C_p is an approximate curvature of the original progressive refractive surface, C_x is a curvature in the direction of the cylinder axis of said original toric surface, and

C_y is a curvature in a direction orthogonal to said cylinder axis.

3. A progressive multifocal lens for correcting an eyesight, said lens having a progressive refractive surface on an eyeball side, said progressive refractive surface comprising:

a far-use portion,

a near-use portion having a refractive power different from the far-use portion, and

a progressive portion whose refractive power changes progressively between the far-use and near-use portions,

wherein the progressive refractive surface is a combination of an original progressive refractive surface for remedying only eyesight and a an original toric surface for remedying only astigmia based on a following formula:

$$z_p = \frac{2\left(\dfrac{(c_p + c_x)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right) - (c_p + c_y)\left(\dfrac{(c_p + c_x)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right)^2 + (c_p + c_y)y_p^2}{1+\sqrt{\left(1-\dfrac{(c_p+c_x)(c_p+c_y)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right)^2 - (c_p+c_y)^2 y_p^2}}$$

where z-axis is an axis which passes through a center of the progressive refractive surface from an object side onto the eyeball side,

x-axis is in a direction of an cylinder axis of the original toric surface, and

y-axis is an axis which is orthogonal to the z-axis and the x-axis,

z_p is any point $P(x_p, y_p, z_p)$ of the combined refractive surface,

C_p is an approximate curvature of the original progressive refractive surface, C_x is a curvature in the direction of the cylinder axis of said original toric surface, and

C_y is a curvature in a direction orthogonal to said cylinder axis.

4. A progressive multifocal lens for correcting an eyesight, said lens having a progressive refractive surface on an object side, said progressive refractive surface comprising:

a far-use portion,

a near-use portion having a refractive power different from the far-use portion, and

a progressive portion whose refractive power changes progressively between the far-use and near-use portions,

wherein the progressive refractive surface is a combination of an original progressive refractive surface for remedying only eyesight and a an original toric surface for remedying only astigmia based on a following formula:

$$z_p = \frac{2\left(\dfrac{(c_p+c_x)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right) - (c_p+c_y)\left(\dfrac{(c_p+c_x)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right)^2 + (c_p+c_y)y_p^2}{1+\sqrt{\left(1-\dfrac{(c_p+c_x)(c_p+c_y)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right)^2 - (c_p+c_y)^2 y_p^2}}$$

where z-axis is an axis which passes through a center of the progressive refractive surface from the object side onto an eyeball side,

x-axis is in a direction of an cylinder axis of the original toric surface,

y-axis is an axis which is orthogonal to the z-axis and the x-axis,

z_p is any point $P(x_p, y_p, z_p)$ of the combined refractive surface,

C_p is an approximate curvature of the original progressive refractive surface, C_x is a curvature in the direction of the cylinder axis of said original toric surface, and C_y is a curvature in a direction orthogonal to said cylinder axis.

5. The progressive multifocal lens as defined in claim 1 wherein the refractive surface on the object side is a spherical surface or a rotationally-symmetric non-spherical surface.

6. The progressive multifocal lens as defined in claim 2 wherein the refractive surface on the eyeball side is a spherical surface or a rotationally-symmetric non-spherical surface.

7. The progressive multifocal lens as defined in claim 3 wherein the refractive surface on the object side is a spherical surface or a rotationally-symmetric non-spherical surface.

8. The progressive multifocal lens as defined in claim 4 wherein the refractive surface on the eyeball side is a spherical surface or a rotationally-symmetric non-spherical surface.

9. The progressive multifocal lens as defined in claim 1 wherein the refractive surface on the object side is a spherical surface or a rotationally-symmetric non-spherical surface.

10. The progressive multifocal lens as defined in claim 2 wherein the refractive surface on the eyeball side is a spherical surface or a rotationally-symmetric non-spherical surface.

11. The progressive multifocal lens as defined in claim 3 wherein the refractive surface on the object side is a spherical surface or a rotationally-symmetric non-spherical surface.

12. The progressive multifocal lens as defined in claim 4 wherein the refractive surface on the eyeball side is a spherical surface or a rotationally-symmetric non-spherical surface.

13. A method of designing a multifocal lens for correcting an eyesight, said lens having a progressive refractive surface on an eyeball side, said progressive refractive

surface comprising a far-use portion, a near-use portion having a refractive power different from the far-use portion, and a progressive portion whose refractive power changes progressively between the far-use and near-use portions, the method comprising:

a) calculating an original progressive refractive surface for remedying only eyesight;

b) calculating an original toric surface for remedying only astigmia based;

c) calculating a combined refractive surface using a following formula:

$$z_p = \frac{2\left(\dfrac{(c_p + c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right) - (c_p + c_x)\left(\dfrac{(c_p + c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right)^2 + (c_p + c_x)x_p^2}{1+\sqrt{\left(1-\dfrac{(c_p + c_x)(c_p + c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right)^2 - (c_p + c_x)^2 x_p^2}}$$

where z-axis is an axis which passes through a center of the progressive refractive surface from an object side onto the eyeball side,

x-axis is in a direction of an cylinder axis of the original toric surface, and

y-axis is an axis which is orthogonal to the z-axis and the x-axis,

z_p is any point $P(x_p, y_p, z_p)$ of the combined refractive surface,

C_p is an approximate curvature of the original progressive refractive surface, C_x is a curvature in the direction of the cylinder axis of said original toric surface, and

C_y is a curvature in a direction orthogonal to said cylinder axis.

14 . A method of designing a multifocal lens for correcting an eyesight, said lens having a progressive refractive surface on an object side, said progressive refractive surface

comprising a far-use portion, a near-use portion having a refractive power different from the far-use portion, and a progressive portion whose refractive power changes progressively between the far-use and near-use portions, the method comprising:

a) calculating an original progressive refractive surface for remedying only eyesight;

b) calculating an original toric surface for remedying only astigmia based;

c) calculating a combined refractive surface using a following formula:

$$z_p = \frac{2\left(\frac{(c_p+c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right)-(c_p+c_x)\left(\frac{(c_p+c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right)^2+(c_p+c_x)x_p^2}{1+\sqrt{\left(1-\frac{(c_p+c_x)(c_p+c_y)y_p^2}{1+\sqrt{1-(c_p+c_y)^2 y_p^2}}\right)^2-(c_p+c_x)^2 x_p^2}}$$

where z-axis is an axis which passes through a center of the progressive refractive surface from an object side onto the eyeball side,

x-axis is in a direction of an cylinder axis of the original toric surface, and

y-axis is an axis which is orthogonal to the z-axis and the x-axis,

z_p is any point $P(x_p, y_p, z_p)$ of the combined refractive surface,

C_p is an approximate curvature of the original progressive refractive surface, C_x is a curvature in the direction of the cylinder axis of said original toric surface, and C_y is a curvature in a direction orthogonal to said cylinder axis.

15. A method of designing a multifocal lens for correcting an eyesight, said lens having a progressive refractive surface on an eyeball side, said progressive refractive

surface comprising a far-use portion, a near-use portion having a refractive power different from the far-use portion, and a progressive portion whose refractive power changes progressively between the far-use and near-use portions, the method comprising:

a) calculating an original progressive refractive surface for remedying only eyesight;

b) calculating an original toric surface for remedying only astigmia based;

c) calculating a combined refractive surface using a following formula:

$$z_p = \frac{2\left(\frac{(c_p+c_x)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right) - (c_p+c_y)\left(\frac{(c_p+c_x)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right)^2 + (c_p+c_y)y_p^2}{1+\sqrt{\left(1-\frac{(c_p+c_x)(c_p+c_y)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right)^2 - (c_p+c_y)^2 y_p^2}}$$

where z-axis is an axis which passes through a center of the progressive refractive surface from an object side onto the eyeball side,

x-axis is in a direction of an cylinder axis of the original toric surface, and

y-axis is an axis which is orthogonal to the z-axis and the x-axis,

z_p is any point $P(x_p, y_p, z_p)$ of the combined refractive surface,

C_p is an approximate curvature of the original progressive refractive surface, C_x is a curvature in the direction of the cylinder axis of said original toric surface, and

C_y is a curvature in a direction orthogonal to said cylinder axis.

16. A method of designing a multifocal lens for correcting an eyesight, said lens having a progressive refractive surface on an object side, said progressive refractive surface

comprising a far-use portion, a near-use portion having a refractive power different from the far-use portion, and a progressive portion whose refractive power changes progressively between the far-use and near-use portions, the method comprising:

a) calculating an original progressive refractive surface for remedying only eyesight;

b) calculating an original toric surface for remedying only astigmia based;

c) calculating a combined refractive surface using a following formula:

$$z_p = \frac{2\left(\dfrac{(c_p+c_x)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right) - (c_p+c_y)\left(\dfrac{(c_p+c_x)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right)^2 + (c_p+c_y)y_p^2}{1+\sqrt{\left(1-\dfrac{(c_p+c_x)(c_p+c_y)x_p^2}{1+\sqrt{1-(c_p+c_x)^2 x_p^2}}\right)^2 - (c_p+c_y)^2 y_p^2}}$$

where z-axis is an axis which passes through a center of the progressive refractive surface from an object side onto the eyeball side,

x-axis is in a direction of an cylinder axis of the original toric surface, and

y-axis is an axis which is orthogonal to the z-axis and the x-axis,

z_p is any point $P(x_p, y_p, z_p)$ of the combined refractive surface,

C_p is an approximate curvature of the original progressive refractive surface, C_x is a curvature in the direction of the cylinder axis of said original toric surface, and

C_y is a curvature in a direction orthogonal to said cylinder axis.

17. The progressive multifocal lens as defined in claim 13 wherein the refractive surface on the object side is a spherical surface or a rotationally-symmetric non-spherical

surface.

18. The progressive multifocal lens as defined in claim 14 wherein the refractive surface on the eyeball side is a spherical surface or a rotationally-symmetric non-spherical surface.

19. The progressive multifocal lens as defined in claim 15 wherein the refractive surface on the object side is a spherical surface or a rotationally-symmetric non-spherical surface.

20. The progressive multifocal lens as defined in claim 16 wherein the refractive surface on the eyeball side is a spherical surface or a rotationally-symmetric non-spherical surface.

21. The progressive multifocal lens as defined in claim 13 wherein the refractive surface on the object side is a spherical surface or a rotationally-symmetric non-spherical surface.

22. The progressive multifocal lens as defined in claim 14 wherein the refractive surface on the eyeball side is a spherical surface or a rotationally-symmetric non-spherical surface.

23. The progressive multifocal lens as defined in claim 15 wherein the refractive surface on the object side is a spherical surface or a rotationally-symmetric non-spherical surface.

24. The progressive multifocal lens as defined in claim 16 wherein the refractive surface on the eyeball side is a spherical surface or a rotationally-symmetric non-spherical surface.